



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/535,663

05/19/2005

Barry Marsden

05065

7652

23338 7590 01/22/2009
DENNISON, SCHULTZ & MACDONALD
1727 KING STREET
SUITE 105
ALEXANDRIA, VA 22314

EXAMINER

SMITHERS, MATTHEW

ART UNIT

PAPER NUMBER

2437

MAIL DATE

DELIVERY MODE

01/22/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/535,663	Applicant(s) MARSDEN, BARRY	
	Examiner Matthew B. Smithers	Art Unit 2437	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 12-21, 23-26, 28 and 29 is/are rejected.
- 7) ☒ Claim(s) 10-11, 22, 27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-9, 12-21 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by US patent 6,104,036 granted to Mazowiesky.

Regarding claim 1, Mazowiesky meets the claimed limitations as follows:

“A method for verifying the authenticity of a bank note or other note having a security thread embedded therein, comprising the steps of: illuminating a first section of said bank note using a first light source; sensing with a first detector light transmitted through said first section and generating a first signal responsive to said transmitted light; scanning said bank note relative to said first section; and comparing the level of correlation between said first signal responsive to said transmitted light and stored characteristics corresponding to the transmission properties of an authentic bank note.”
see Abstract; column 2, line 50 to column 3, line 26; column 4, line 37 to column 5, line 15; column 5, line 66 to column 6, line 17; column 7, lines 16-43 and Figures 1, 3 and 8.

Regarding claim 2, Mazowiesky meets the claimed limitations as follows:

“A method as claimed in claim 1, wherein said security thread is disposed along the short axis of said bank note.” see column 1, lines 38-40.

Regarding claim 3, Mazowiesky meets the claimed limitations as follows:

“A method as claimed in claim 1, wherein said illuminating step further comprises illuminating a second section of said bank note using a second light source.” see Abstract; column 2, line 50 to column 3, line 26; column 4, line 37 to column 5, line 15; column 5, line 66 to column 6, line 17; column 7, lines 16-43 and Figures 1, 3 and 8.

Regarding claim 4, Mazowiesky meets the claimed limitations as follows:

“A method as claimed in claim 3, wherein said first and second light sources are positioned substantially vertically in the same plane as said security thread.” see Abstract; column 2, line 50 to column 3, line 26; column 4, line 37 to column 5, line 15; column 5, line 66 to column 6, line 17; column 7, lines 16-43 and Figures 1, 3 and 8.

Regarding claim 5, Mazowiesky meets the claimed limitations as follows:

“A method as claimed in claim 3, wherein said sensing step further comprises sensing with a second detector light transmitted through said second section of said bank note and generating a second signal responsive to said transmitted light.” see Abstract; column 2, line 50 to column 3, line 26; column 4, line 37 to column 5, line 15; column 5, line 66 to column 6, line 17; column 7, lines 16-43 and Figures 1, 3 and 8.

Regarding claim 6, Mazowiesky meets the claimed limitations as follows:

“A method as claimed in claim 5, wherein said first and second signals are summed prior to said comparing step.” see column 7, lines 16-43 and Figures 1, 3 and 8.

Regarding claim 7, Mazowiesky meets the claimed limitations as follows:

“A method as claimed in claim 1, wherein said stored characteristics corresponding to the transmission properties of an authentic bank note are firstly obtained by scanning an

Art Unit: 2437

authentic bank note having a security thread embedded therein.” see Abstract; column 2, line 50 to column 3, line 26; column 4, line 37 to column 5, line 15; column 5, line 66 to column 6, line 17; column 7, lines 16-43 and Figures 1, 3 and 8.

Regarding claim 8, Mazowiesky meets the claimed limitations as follows:

“A method as claimed in claim 7, wherein said stored characteristics corresponding to the transmission properties of an authentic bank note are based on a combination of the resultant rise time, fall time, pulse amplitude, and pulse width obtained from said scanning step.” see Abstract; column 2, line 50 to column 3, line 26; column 4, line 37 to column 5, line 15; column 5, line 66 to column 6, line 17; column 7, lines 16-43 and Figures 1, 3 and 8.

Regarding claim 9, Mazowiesky meets the claimed limitations as follows:

“A method as claimed in claim 1, wherein said stored characteristics corresponding to the transmission properties of an authentic bank note are retained in a non-volatile memory.” see Abstract; column 2, line 50 to column 3, line 26; column 4, line 37 to column 5, line 15; column 5, line 66 to column 6, line 17; column 7, lines 16-43 and Figures 1, 3 and 8.

Regarding claim 12, Mazowiesky meets the claimed limitations as follows:

“An apparatus suitable for verifying the authenticity of a bank note or other note having a security thread embedded therein, comprising: a first light source disposed opposite to a first detector, wherein said first detector outputs a first signal responsive to the transmitted light, said first light source and said first detector being disposed such that said bank note can pass there between; encoding means for digitally encoding the

Art Unit: 2437

output of said first detector; and processing means for comparing the level of correlation between said digitally encoded output and stored characteristics corresponding to the transmission properties of an authentic bank note.” see Abstract; column 2, line 50 to column 3, line 26; column 4, line 37 to column 5, line 15; column 5, line 66 to column 6, line 17; column 7, lines 16-43 and Figures 1, 3 and 8.

Regarding claim 13, Mazowiesky meets the claimed limitations as follows:

“An apparatus as claimed in claim 12, further comprising a second light source disposed opposite to a second detector, wherein said second detector outputs a second signal responsive to the transmitted light, said second light source and said second detector being disposed such that said bank note can pass there between.” see Abstract; column 2, line 50 to column 3, line 26; column 4, line 37 to column 5, line 15; column 5, line 66 to column 6, line 17; column 7, lines 16-43 and Figures 1, 3 and 8.

Regarding claim 14, Mazowiesky meets the claimed limitations as follows:

“An apparatus as claimed in claim 13, wherein said first and second detectors are positioned substantially vertically in the same plane as said security thread.” see Abstract; column 2, line 50 to column 3, line 26; column 4, line 37 to column 5, line 15; column 5, line 66 to column 6, line 17; column 7, lines 16-43 and Figures 1, 3 and 8.

Regarding claim 15, Mazowiesky meets the claimed limitations as follows:

“An apparatus as claimed in claim 12, wherein said encoding means also digitally encodes the output of said second detector.” see Abstract; column 2, line 50 to column 3, line 26; column 4, line 37 to column 5, line 15; column 5, line 66 to column 6, line 17; column 7, lines 16-43 and Figures 1, 3 and 8.

Regarding claim 16, Mazowiesky meets the claimed limitations as follows:

“An apparatus as claimed in claim 15, further comprising summing means for receiving and combining the digitally encoded outputs of said first and second detectors.” see Abstract; column 2, line 50 to column 3, line 26; column 4, line 37 to column 5, line 15; column 5, line 66 to column 6, line 17; column 7, lines 16-43 and Figures 1, 3 and 8.

Regarding claim 17, Mazowiesky meets the claimed limitations as follows:

“An apparatus as claimed in claim 12, wherein said stored characteristics corresponding to the transmission properties of an authentic bank note are based on a combination of the resultant rise time, fall time pulse amplitude, and pulse width obtained from said scanning an authentic bank note having a security thread embedded therein.” see Abstract; column 2, line 50 to column 3, line 26; column 4, line 37 to column 5, line 15; column 5, line 66 to column 6, line 17; column 7, lines 16-43 and Figures 1, 3 and 8.

Regarding claim 18, Mazowiesky meets the claimed limitations as follows:

“An apparatus as claimed in claim 12, wherein said stored characteristics corresponding to the transmission properties of an authentic bank note are stored in a non-volatile memory.” see Abstract; column 2, line 50 to column 3, line 26; column 4, line 37 to column 5, line 15; column 5, line 66 to column 6, line 17; column 7, lines 16-43 and Figures 1, 3 and 8.

Regarding claim 19, Mazowiesky meets the claimed limitations as follows:

“An apparatus as claimed in claim 18, wherein said nonvolatile memory comprises a solid state memory.” see Abstract; column 2, line 50 to column 3, line 26; column 4, line

Art Unit: 2437

37 to column 5, line 15; column 5, line 66 to column 6, line 17; column 7, lines 16-43 and Figures 1, 3 and 8.

Regarding claim 20, Mazowiesky meets the claimed limitations as follows:

“An apparatus as claimed in claim 13, wherein said first and second light sources are infrared emitters.” see column 6, lines 54-56.

Regarding claim 21, Mazowiesky meets the claimed limitations as follows:

“An apparatus as claimed in claim 13, wherein said first and second detectors are infrared photo detectors.” see Abstract; column 2, line 50 to column 3, line 26; column 4, line 37 to column 5, line 15; column 5, line 66 to column 6, line 17; column 7, lines 16-43 and Figures 1, 3 and 8.

Regarding claim 23, Mazowiesky meets the claimed limitations as follows:

“An apparatus as claimed in claim 12, wherein said processing means comprises a microprocessor unit.” see column 5, lines 31-33 and Figure 2A, element 212.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 24-26 and 28-29 are rejected under 35 U.S.C. 102(b) as being anticipated by US 4,549,661 granted to Morishita et al.

Regarding claim 24, Morishita meets the claimed limitations as follows:

Art Unit: 2437

“An apparatus for verifying the authenticity of a large volume of bank notes or other notes each having a security thread embedded therein, comprising: a bank note transfer route for transferring each of said bank notes; a scanning unit for obtaining various characteristics of each of said bank notes, said scanning unit comprising at least one light source disposed opposite to at least one detector, wherein said at least one detector outputs a signal responsive to the transmitted light, said at least one light source and said at least one detector being disposed such that each of said bank notes can pass there between; a processing means for receiving and digitally encoding the output of said at least one detector and comparing the level of correlation between said digitally encoded output and stored characteristics corresponding to the transmission properties of an authentic bank note; and selection means for sorting authentic bank notes and un-correlated bank notes.” see Abstract; column 4, line 22 to column 5, line 2; column 9, lines 56-65; column 12, lines 6-39; and Figures 1, 12, 13, 15, 17 and 18.

Regarding claim 25, Morishita meets the claimed limitations as follows:

“An apparatus as claimed in claim 24, wherein said bank note transfer route further comprises a floating level tray and feeder wheel mechanism.” see Abstract; column 4, line 22 to column 5, line 2; column 9, lines 56-65; column 12, lines 6-39; and Figures 1, 12, 13, 15, 17 and 18.

Regarding claim 26, Morishita meets the claimed limitations as follows:

“An apparatus as claimed in claim 24, wherein each of said bank notes is transferred substantially in the horizontal plane.” see Abstract; column 4, line 22 to column 5, line 2; column 9, lines 56-65; column 12, lines 6-39; and Figures 1, 12, 13, 15, 17 and 18.

Regarding claim 28, Morishita meets the claimed limitations as follows:

“An apparatus as claimed in claim 24, wherein said selection means further comprises a conveyor mechanism, authentic bank note tray and counterfeit bank note tray.” see Abstract; column 4, line 22 to column 5, line 2; column 9, lines 56-65; column 12, lines 6-39; and Figures 1, 12, 13, 15, 17 and 18.

Regarding claim 29, Morishita meets the claimed limitations as follows:

“An apparatus as claimed in claim 28, wherein each of said trays are provided with electronic sensors allowing the number of bank notes falling into each tray to be counted.” see Abstract; column 4, line 22 to column 5, line 2; column 9, lines 56-65; column 12, lines 6-39; and Figures 1, 12, 13, 15, 17 and 18.

Allowable Subject Matter

Claims 10, 11, 22 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

With respect to claims 10 and 11, the cited prior art fails to specifically teach said comparing step further comprises the step of checking whether said first signal responsive to said transmitted light from said scanning step meets a required threshold prior to comparing the level of correlation and said required threshold is based on the ratio of the resultant pulse width to pulse rise time obtained from said scanning step.

With respect to claim 22, the cited prior art fails to specifically teach a visual or audible alarm, being activated if said digitally encoded output and said stored characteristics corresponding to the transmission properties of an authentic bank note do not correlate.

With respect to claim 27, the cited prior art fails to specifically teach said scanning unit and said processing means are located in a secure moulded unit to prevent unauthorised access by personnel.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A. Buntscheck (US 7,412,087) discloses a system for monitoring the presence of counterfeit notes.

B. Puttkammer (US 7,133,124) discloses a security element structure for bank notes and documents.

C. Bercovitz (US 5,034,616) discloses a system for authenticating bank notes.

D. Kaule et al (US 4,598,205) discloses security paper with authenticity features.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew B. Smithers whose telephone number is (571) 272-3876. The examiner can normally be reached on Monday-Friday (8:00-4:30) EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel L. Moise can be reached on (571) 272-3865. The fax phone

Art Unit: 2437

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Matthew B Smithers/
Primary Examiner, Art Unit 2437